

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	09/265,819	SHINOHARA, MAHITO	
	Examiner	Art Unit	
	Gevell Selby	2615	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 9/11/2004.
2. ☒ The allowed claim(s) is/are 17-22 (renumbered as 1-6 respectively).
3. ☒ The drawings filed on 11 September 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 17-22 are allowed.
2. The following is an examiner's statement of reasons for allowance:

In regard to claim 17, the prior art does not disclose the combination of features claimed, including the limitations of a sensor chip formed on a single semiconductor chip, comprising: a terminal which externally inputs a second reference clock signal from outside said sensor chip; and a switch connected to at least said reference clock signal generation circuit and said terminal, which is driven externally outside said single semiconductor chip to effect switching between internally driving said image pickup portion and externally driving said image pickup portion. Dependent claims 18 and 19 are allowable by incorporation of claim 17.

In regard to claim 20, the prior art does not disclose the combination of features claimed, including the limitations of a drive pulse generation chip formed on a single semiconductor chip, comprising: a terminal which externally inputs a second reference clock signal from outside said sensor chip; and a switch connected to at least said reference clock signal generation circuit and said terminal, which is driven externally outside said single semiconductor chip to effect switching between internally driving said image pickup portion and externally driving said image pickup portion. Dependent claim 21 is allowable by incorporation of claim 20.

In regard to claim 22, the prior art does not disclose the combination of features claimed, including the limitations of a sensor chip formed on a single semiconductor substrate comprising: a terminal which externally inputs a second reference clock signal from outside said

Art Unit: 2615

semiconductor substrate; a first control circuit which effects control so that said drive pulse generation circuit generates the first pulse, wherein said image pickup apparatus further comprises a second control circuit which is provided externally to said single semiconductor substrate and effects control so that said drive pulse generation circuit generates the second pulse; and a switch connected to at least said reference clock signal generating circuit and said terminal, which effects internally driving said image pickup portion by said first control circuit and externally driving said image pickup portion by said second control circuit.

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suda, US 6,469,736 discloses a video camera with a one-chip signal processing IC (see column 9, lines 16-18 and figure 2). The camera has two clocks, one on the chip and one external clock, with a switch between them controlled by a microcomputer (see column 5, line 64 to column 6, line 14). The Suda reference does not however disclose an image pickup portion, scan circuit, and drive pulse generation circuit on the chip.

Lee et al., US 2002/0101528, discloses an image sensor device on a single chip having an image pickup portion, scan circuit, drive pulse generation circuit and clock generation circuit (see figures 2 and 3 and paragraph 37). The reference does not disclose a terminal for an external clock signal or a switch controlled by an external control to switch between driving the image pickup portion internally and externally.

Art Unit: 2615

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs

  
TUAN HO  
PRIMARY EXAMINER